

Injury among Residents of Apache County, Arizona 2005

Injury is a public health problem that impacts the lives of thousands of Arizona residents each year. Chronic pain, disability, large medical bills, changes in quality of life, and premature death are just some of the possible effects of injuries. These effects can extend beyond injured individuals to their families and communities. With non-fatal injuries, family members are often required to provide care, which can result in time away from work, loss of income, and increases in stress within the family. At the community level, the financial burden of injuries can include medical expenses, rehabilitation, lost wages, and lost productivity. Most injuries are predictable and preventable. Understanding the causes of injury is an important step toward reducing injury-related morbidity and mortality.

The following report identifies the leading causes of injury among residents of Apache County in 2005. This report is intended to be used as a guide for strategy development, program implementation, and evaluation. The Arizona Department of Health Services Injury Prevention Program operates under the vision of reducing injuries in Arizona using integrated surveillance and evidence-based interventions. This report was generated to increase awareness of county-specific injury issues and to facilitate opportunities for effective injury prevention activities.

Figure 1. Injury Pyramid for Apache County Residents, Arizona 2005

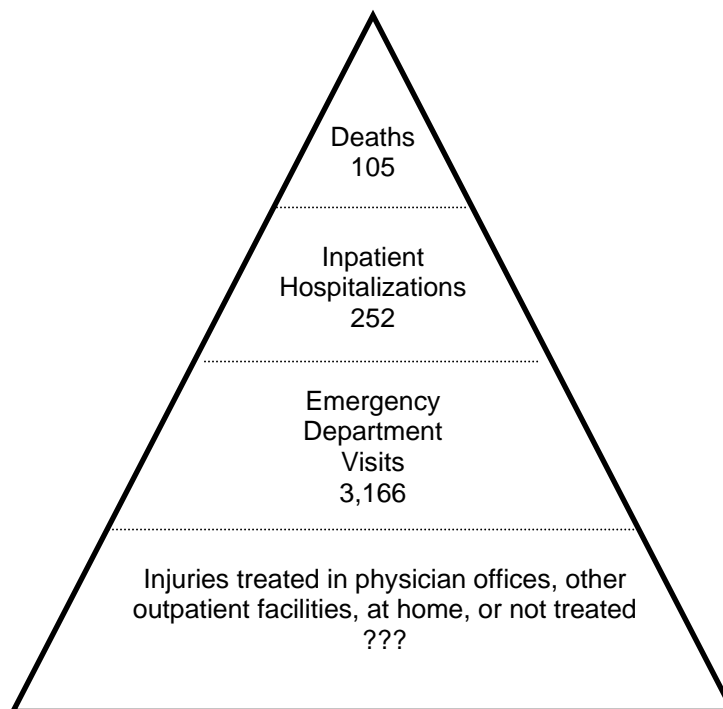


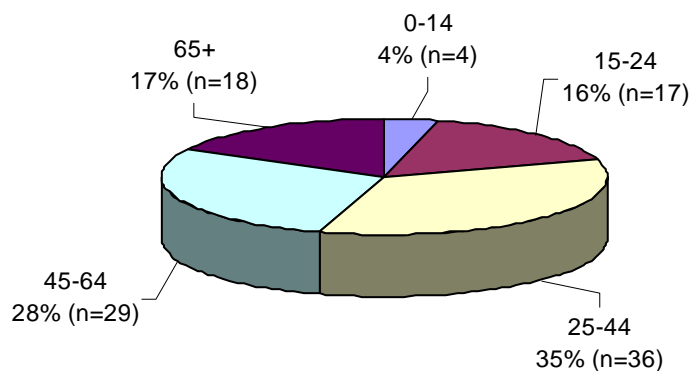
Figure 1 shows an injury pyramid for residents of Apache County during 2005. This pyramid shows that deaths represent the smallest proportion of injuries. The proportions increase towards the foundation of the pyramid, which is comprised of

hospital discharges, emergency department visits, and self care. Although injuries that do not require medical treatment may be the most numerous, no existing datasets capture these types of injuries.

Deaths

In 2005, there were 105 injury-related deaths in Apache County. Most of these deaths were among males (77 percent, n=81), and females accounted for 23 percent (n=24). The largest percentage of deaths was among individuals ages 25 to 44 years (35 percent, n=36). Age distributions are shown in Figure 2.

Figure 2. Injury-Related Deaths by Age Group, Apache County, Arizona 2005 (n=105)



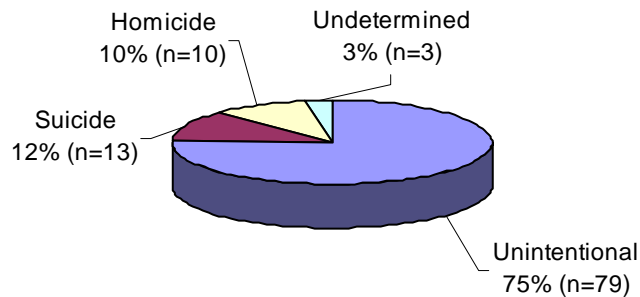
Does not include one male with missing age

American Indians accounted for the majority of injury-related deaths in Apache County (77 percent, n=81), followed by White Non-Hispanics (17 percent, n=18). Rates by racial/ethnic groups could not be calculated due to small sample sizes.

For the state of Arizona, unintentional injury is the leading cause of death among all residents ages 1 to 44 years. However, for residents of Apache County, unintentional injury is the leading cause of death for individuals ages 1 to 64 years.¹ Seventy-five percent of injury-related deaths in Apache County were due to unintentional injuries (n=79); 12 percent were suicides (n=13); 10 percent were homicides (n=10); and 3 percent were of undetermined intent (n=3). Figure 3 shows injury-related deaths by intent.

¹ Arizona Health Status and Vital Statistics 2005.

**Figure 3. Injury-Related Deaths by Intent,
Apache County, Arizona 2005 (n=105)**



Apache County Injury-Related Deaths Compared to Other Arizona Counties

Table 1 shows the intent of injury-related deaths for residents of Apache County compared to residents of the rest of Arizona. The leading intent of injury-related deaths was unintentional for both Apache County and the remaining counties, accounting for the majority of injury-related deaths. Apache County had a smaller percentage of suicides (12 percent) than the remainder of Arizona (20 percent).

Table 1. Intent of Injury-Related Deaths, Apache County Compared to Other Arizona Counties, 2005			
Apache County (n=105)		Arizona, excluding Apache County (n=4,485)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	75	Unintentional	65
Suicide	12	Suicide	20
Homicide	10	Homicide	11
Undetermined	3	Undetermined	4

The most common causes of unintentional injury-related deaths in Apache County were motor vehicle traffic crashes (52 percent, n=41) and injuries from nature or environment (19 percent, n=15). Nature/environment injuries include dog bites, being kicked by animals (e.g. horses), as well as injuries from excessive heat or cold. The causes of unintentional injury-related deaths during 2005 in Apache County are shown in Table 2.

Table 2. Causes of Unintentional Injury-Related Deaths among Apache County Residents, Arizona 2005		
Cause	Number	Percent
Motor vehicle traffic	41	52%
Nature/environment	15	19%
Poisoning	8	10%
Other/unspecified	6	7%
Suffocation	3	4%
Fire/hot object	2	3%
Fall	2	3%
Firearm	1	1%
Struck by/against	1	1%
Total	79	100%

Motor vehicle traffic crashes

Males accounted for 76 percent of unintentional motor vehicle traffic-related deaths (n=31) and females accounted for 24 percent (n=10). Two percent of these deaths were among children 14 years and under (n=1); 20 percent were among individuals ages 15 to 24 years (n=8); 66 percent were among individuals ages 25 to 64 years (n=27); and 12 percent were among individuals 65 years and older (n=5).

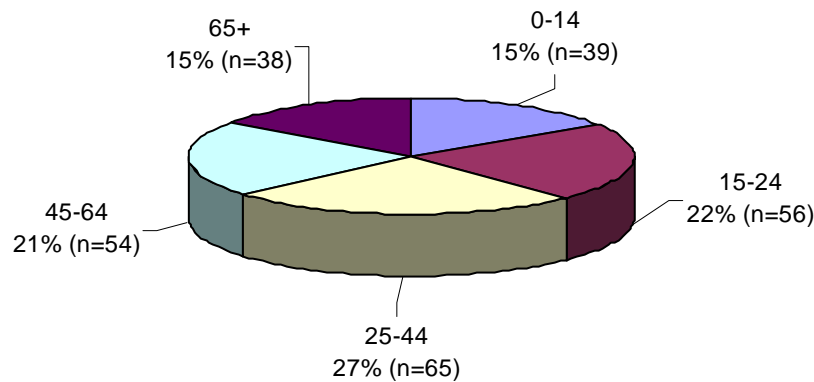
For most of the motor vehicle traffic-related deaths, the location of the injured person was not specified on the death certificate (51 percent, n=21). Thirty-two percent of the deaths were pedestrians (n=13), and 12 percent were occupants of motor vehicles (n=5). Five percent of the deaths were motorcyclists (n=2).

Non-Fatal Inpatient Hospitalizations²

In 2005, there were 252 non-fatal inpatient hospitalizations due to injury among residents of Apache County. Sixty-five percent were male (n=164) and 35 percent were female (n=88). Twenty-seven percent of the hospitalizations were among individuals ages 25 to 44 years (n=65). Figure 4 shows injury-related inpatient hospitalizations by age group among residents of Apache County.

² The 2005 Hospital Discharge Database does not include data from federal or tribal hospitals (Indian Health Services).

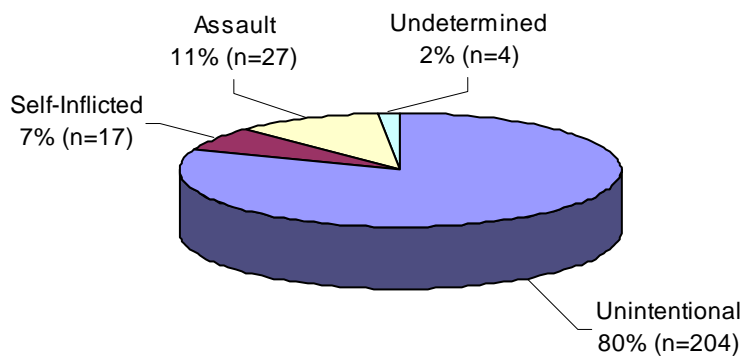
Figure 4. Injury-Related Inpatient Hospitalizations by Age Group, Apache County, Arizona (n=252)



There were 158 injury-related hospitalizations among American Indian residents of Apache County (63 percent). The second highest number was among White Non-Hispanic individuals (27 percent, n=67). Rates by racial/ethnic groups could not be calculated due to small sample sizes.

Eighty percent of the inpatient hospitalizations were due to unintentional injuries (n=204); 11 percent were due to assaults (n=27); 7 percent were due to self-inflicted injuries (n=17); and 2 percent were of undetermined intent (n=4). Figure 5 shows injury-related hospitalizations by intent.

Figure 5. Injury-Related Inpatient Hospitalizations by Intent, Apache County, Arizona 2005 (n=252)



Apache County Injury-Related Hospitalizations Compared to Other Arizona Counties

Table 3 shows the intent of injury-related hospitalizations for residents of Apache County compared to residents of the rest of Arizona. The leading intent of injury-related hospitalizations was unintentional for both Apache County and the remaining counties, accounting for the majority of injury-related hospitalizations. Apache County had a

larger percentage of hospitalizations due to assaults (11 percent) than the remainder of Arizona (6 percent).

Table 3. Intent of Injury-Related Inpatient Hospitalizations, Apache County Compared to Other Arizona Counties, 2005			
Apache County (n=252)		Arizona, excluding Apache County (n=34,722)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	80	Unintentional	84
Self-Inflicted	7	Self-Inflicted	8
Assault	11	Assault	6
Undetermined	2	Undetermined	2

The most common causes of unintentional inpatient hospitalizations in Apache County were motor vehicle traffic crashes (26 percent, n=53) and falls (24 percent, n=49). Table 4 shows the causes of unintentional injury-related hospitalizations among residents of Apache County.

Table 4. Causes of Unintentional Injury-Related Inpatient Hospitalizations among Apache County Residents, Arizona 2005		
Cause	Number	Percent
Motor vehicle traffic	53	26%
Fall	49	24%
Other/unspecified	31	15%
Fire/hot object	20	10%
Transport	11	5%
Nature/environment	8	4%
Cut/pierce	6	3%
Motor vehicle non-traffic	6	3%
Poisoning	6	3%
Struck by/against	6	3%
Other pedal cycle	4	2%
Overexertion	4	2%
Total	204	100%

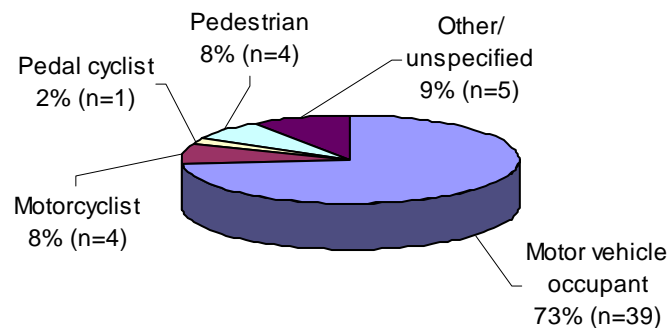
Motor vehicle traffic crashes

Males accounted for 60 percent of unintentional motor vehicle traffic-related hospitalizations (n=32) and females accounted for 40 percent (n=21). Seventeen percent of these hospitalizations were among children 14 years and under (n=9); 28 percent were among individuals ages 15 to 24 years (n=15); 53 percent were among individuals ages 25 to 64 years (n=28); and 2 percent were among individuals 65 years and older (n=1).

For 73 percent of the motor vehicle traffic-related hospitalizations, the injured person was an occupant of a motor vehicle (n=39). Eight percent were motorcyclists (n=4); 8 percent were pedestrians (n=4); 2 percent were pedal cyclists (n=1); and 9 percent

were other/unspecified (n=5). Figure 6 shows hospitalizations due to motor vehicle traffic crashes by injured person.

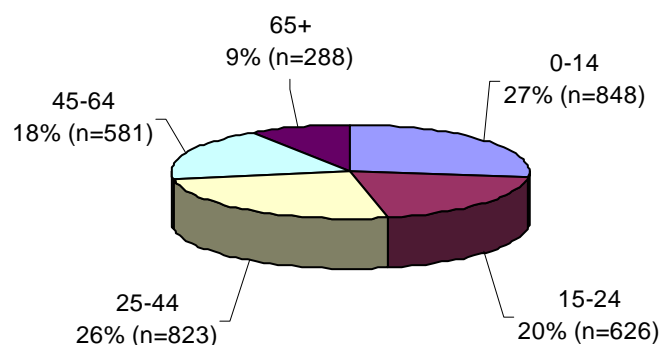
Figure 6. Inpatient Hospitalizations due to Unintentional Motor Vehicle Traffic Crashes by Injured Person, Apache County, Arizona 2005 (n=53)



Non-Fatal Emergency Department Visits³

In 2005, there were 3,166 injury-related emergency department visits among residents of Apache County. Males accounted for 60 percent of these visits (n=1,885) and females accounted for 40 percent (n=1,281). The largest percentage of visits was among children 14 years and under (27 percent, n=848). Figure 7 shows injury-related emergency department visits by age group.

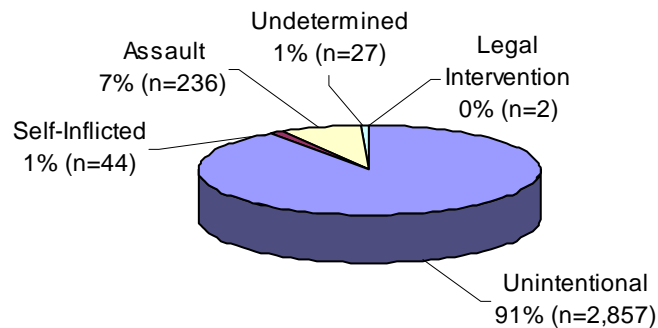
Figure 7. Injury-Related Emergency Department Visits by Age Group, Apache County, Arizona 2005 (n=3,166)



³ The 2005 Outpatient Emergency Department Database does not include data from federal or tribal hospitals (Indian Health Services).

Ninety-one percent of the emergency department visits were due to unintentional injuries (n=2,857); 7 percent were due to assaults (n=236); 1 percent were due to self-inflicted injuries (n=44); and 1 percent were of undetermined intent (n=27). There were two emergency department visits due to legal intervention. Figure 8 shows emergency department visits by intent.

Figure 8. Injury-Related Emergency Department Visits by Intent, Apache County, Arizona 2005 (n=3,166)



Apache County Injury-Related Emergency Department Visits Compared to Other Arizona Counties

Table 5 shows the intent of injury-related emergency department visits for residents of Apache County compared to residents of the rest of Arizona. The leading intent of injury-related visits was unintentional for both Apache County and the remaining counties, accounting for the majority of injury-related visits. Apache County had a larger percentage of visits due to assaults (7 percent) than the remainder of Arizona (4 percent).

Table 5. Intent of Injury-Related Emergency Department Visits, Apache County Compared to Other Arizona Counties, 2005			
Apache County (n=3,166)		Arizona, excluding Apache County (n=375,505)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	91	Unintentional	94
Self-Inflicted	1	Self-Inflicted	1
Assault	7	Assault	4
Undetermined	1	Undetermined	1

The most common causes of unintentional injury-related emergency department visits in Apache County were falls (26 percent, n=731) and struck by/against injuries (15 percent, n=423). Table 6 shows the causes of unintentional injury-related emergency department visits for Apache County residents in 2005.

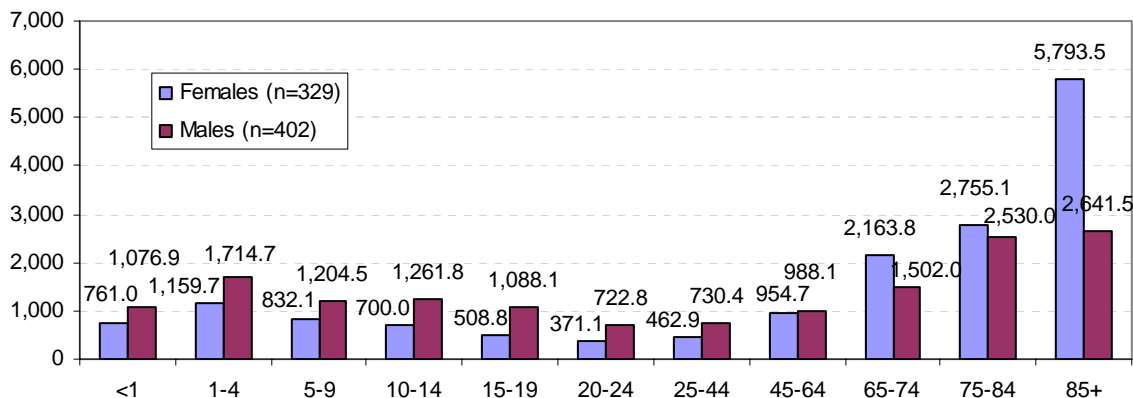
Table 6. Causes of Unintentional Injury-Related Emergency Department Visits among Apache County Residents, Arizona 2005		
Cause	Number	Percent
Fall	731	26%
Struck by/against	423	15%
Overexertion	356	13%
Motor vehicle traffic	322	11%
Cut/pierce	296	10%
Other/unspecified	257	9%
Nature/environment	152	5%
Other pedal cycle	72	3%
Fire/hot object	71	2%
Transport	68	2%
Motor vehicle non-traffic	64	2%
Poisoning	29	1%
Machinery	16	1%
Total	2,857	100%

Falls

There were 731 emergency department visits due to unintentional falls. Males accounted for 55 percent of these visits (n=402) and females accounted for 45 percent (n=329). Children 14 years and under had the highest percentage of unintentional fall-related emergency department visits (35 percent, n=259). Twelve percent of visits were among individuals ages 15 to 24 years (n=85); 33 percent were among individuals ages 25 to 64 years (n=243); and 20 percent were among individuals 65 years and older (n=144).

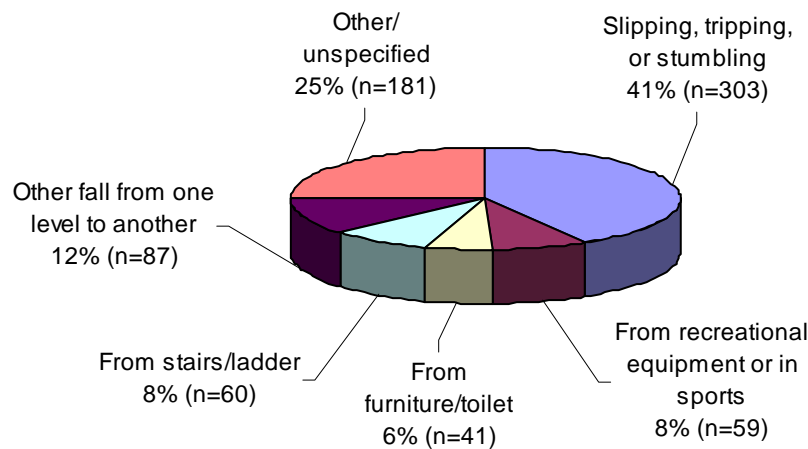
The highest rates of unintentional fall-related emergency department visits were among older adults. Females 85 years and older had a rate of 5,793.5 fall-related emergency department visits per 100,000 residents. Figure 9 shows emergency department visit rates of unintentional falls by age group and gender.

Figure 9. Unintentional Fall-Related Emergency Department Visit Rates per 100,000, Apache County, Arizona 2005 (n=731)



For 25 percent of the unintentional fall-related emergency department visits, information regarding contributing event was not specified in the emergency department database (n=181). The most frequently specified contributing events were slipping, tripping, or stumbling (41 percent, n=303) and other falls from one level to another (12 percent, n=87). Figure 10 shows emergency department visits due to unintentional falls by contributing event.

Figure 10. Emergency Department Visits due to Unintentional Falls by Contributing Event, Apache County, Arizona 2005 (n=731)



Summary

In 2005, there were 105 injury-related deaths in Apache County, and the largest percentage of deaths was among individuals ages 25 to 44 years (35 percent, n=36). Unintentional injuries accounted for 75 percent of injury-related deaths in Apache County (n=79). The most common cause of unintentional injury-related deaths was motor vehicle traffic crashes (52 percent, n=41). For residents of Apache County, unintentional injury is the leading cause of death for individuals ages 1 to 64 years.¹ Twelve percent of injury-related deaths were suicides (n=13); 10 percent were homicides (n=10); and 3 percent were of undetermined intent (n=3).

There were 252 non-fatal inpatient hospitalizations due to injury among residents of Apache County. Twenty-seven percent of the hospitalizations were among individuals ages 25 to 44 years (n=65). Eighty percent of the hospitalizations were due to unintentional injuries (n=204); 11 percent were due to assaults (n=27); 7 percent were due to self-inflicted injuries (n=17); and 2 percent were of undetermined intent (n=4). The most common cause of unintentional inpatient hospitalizations was motor vehicle traffic crashes (26 percent, n=53). The hospitalization database does not include data from federal or tribal hospitals.

There were 3,166 injury-related non-fatal emergency department visits among residents of Apache County in 2005. The largest percentage of visits was among children 14 years and under (27 percent, n=848). Ninety-one percent of the emergency department visits were due to unintentional injuries (n=2,857); 7 percent were due to assaults (n=236); 1 percent were due to self-inflicted injuries (n=44); and 1 percent were of undetermined intent (n=27). The most common cause for unintentional emergency department visits was falls (26 percent, n=731). The emergency department database does not include data from federal or tribal hospitals.

Source for deaths: 2005 Death Certificate Database

Source for hospitalizations: 2005 Inpatient Hospital Discharge Database

Source for emergency department visits: 2005 Outpatient Emergency Department Database

Arizona Counties with Population, 2005

